

AUG 21 2009

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s): GROEZINGER	Confirmation No. 7398
Application No.: 10/591,198	Art Unit: 1793
Filed: 30 Aug 2006	Examiner: LIN, KUANG Y
Title: WATER-SOLUBLE SALT CORES	
Attorney Docket No.: 1032/0108PUS1	

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

APPLICANT'S APPEAL BRIEF

Dear Sir:

A Notice of Appeal was filed in the above application on July 13, 2009, with a Request for Pre-Appeal Brief Review. A Notice of Panel Decision from Pre-Appeal Brief Review dated July 24, 2009, indicated that at least one actual issue for appeal was found to exist and that the application should proceed to the Board of Patent Appeals and Interferences. Applicant is filing this Appeal Brief within two months of the date of the Notice of Appeal as required by 37 C.F.R. 41.37 together with the required fee.

I. REAL PARTY IN INTEREST

The real party in interest in the above-captioned application is Kolbenschmidt Aluminium Technologie GmbH as shown by the assignment recorded at patent Reel 022216 Frame 0519 on February 5, 2009.

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II. RELATED APPEALS AND INTERFERENCES

There are no prior or pending appeals, interferences or judicial proceedings known to appellant, the appellant's legal representatives or assignee which may be related to, directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

III. STATUS OF CLAIMS

Claims 1, 2 and 4-8 are pending in the subject application.

Claim 3 has been cancelled.

Claim 8 has been withdrawn from consideration.

Claims 1, 2 and 4-7 are rejected, and the rejection of claim 1, 2 and 4-7 is being appealed.

IV. STATUS OF AMENDMENTS

An amendment after final rejection was filed on June 8, 2009. The Advisory Action dated June 19, 2009, indicated that this after-final amendment would be entered for purposes of appeal.

V. SUMMARY OF CLAIMED SUBJECT MATTER**Claim 1**

Claim 1 recites water soluble salt cores manufactured by compacting a mixture of water soluble salts and binder under pressure and by subsequently subjecting the compacted mixture to a thermal treatment (page 2, lines 5-7). The binder is an

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inorganic phosphate or a mixture of inorganic phosphates and comprises binder between 0.5 and 10 by wt. % of the mixture of water soluble salts and binder (page 2, lines 7-9). The mixture of water-soluble salts and the binder further includes between approximately 1 and 10% by weight of a parting agent comprising graphite (page 2, lines 15-16). The mixture of the water soluble salts and the binder is compacted and subsequently sintered at approximately 200 degrees C (page 2, lines 12-13), and the compacted and sintered mixture is not subjected to outgassing at a temperature below 700 degrees C during a heating process in the subsequent thermal treatment (page 4, lines 14-18).

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

Whether claims 1, 2 and 4-7 are properly rejected under 35 U.S.C. 103(a) as being unpatentable over SU 1196096 in view of U.S. 2,878,539 to Halpern (hereinafter, "Halpern").

Whether claims 1, 2 and 4-7 are properly rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. 3,764,575 to Anderko (hereinafter, "Anderko") in view of U.S. 5,573,055 to Melling (hereinafter, "Melling") and Halpern.

VII. ARGUMENT

A) Rejections Based on SU 1196096 and Halpern

Claim 1

Claim 1 recites, inter alia, water soluble salt cores manufactured by compacting a mixture of water soluble salts and binder under pressure and by subsequently

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subjecting the compacted mixture to a thermal treatment. The binder is an inorganic phosphate or a mixture of inorganic phosphates, and the binder further includes between approximately 1 and 10% by weight of a parting agent comprising graphite.

SU 1196096 discloses a water-soluble salt core that uses a phosphate binder. However, SU 1196096 does not disclose or suggest the use of graphite in the phosphate binder. Halpern discloses a sand-based core with a resin binder. Halpern indicates that graphite may be added to this sand-and-resin system. The examiner argues that one skilled in the art would have found it obvious to add graphite to the salt and phosphate composition of SU 1196096 because graphite is used in a sand and resin composition. However, the record contains no reason for making this modification to SU 1196096. The examiner has merely identified the presence of graphite in an unrelated molding process and asserted without any explanation that it would be obvious to include graphite in a different process in order to "facilitate the foundry process." Such conclusory statements do not constitute a prima facie case of obviousness, and claim 1 is submitted to be allowable for at least this reason.

It is respectfully submitted that the problems involved in forming cores from sand are different than those that occur when soluble cores are used. For example, one skilled in the relevant art might expect a parting agent to be useful in Halpern to reduce the adhesion of the sand to the molded product. This might be said to "facilitate the foundry process." However, because sand is not disclosed in SU 1196096 and the core in that reference is soluble, it is not clear how graphite could facilitate the foundry process in SU 1196096. There is thus no reason to add graphite to SU 1196096. The examiner has not addressed the differences between the process of SU 1196096 and

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Halpern, has not explained what benefit one would expect to obtain by adding graphite to SU 1196096, has not provided a cogent reason for adding graphite to SU 1196096 and has not presented a prima facie case of obviousness. Claim 1 is submitted to be allowable for at least this reason.

Claims 2 and 4-7

Claims 2 and 4-7 depend from claim 1 and are submitted to be allowable for at least the same reasons as claim 1.

B) Rejections based on Anderko in view of Melling and Halpern

Claim 1

Claim 1 is also rejected under 35 U.S.C. 103(a) as being unpatentable over Anderko in view of Melling and further in view of Halpern. The examiner combines Anderko and Melling to suggest that a salt core can have a phosphate binder. The examiner then argues that graphite should be added to a soluble salt and phosphate core because graphite is used in Halpern's sand and resin core. However, this rejection suffers from the same deficiencies as the above rejection based on SU 1196096 and Halpern. Specifically, the examiner has provided no reason for adding graphite to a salt and phosphate core. Neither sand nor resin is present in a salt and phosphate core, and the record does not suggest that any benefit would be obtained by adding graphite to a salt and phosphate core. The conclusory statement "to facilitate the foundry process" does not cure this problem. A prima facie case of obviousness has not been presented in connection with claim 1, and claim 1 is submitted to be

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allowable for at least this reason.

Claims 2 and 4-7

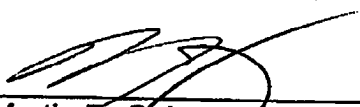
Claims 2 and 4-7 depend from claim 1 and are submitted to be allowable for at least the same reasons as claim 1.

CONCLUSION

Wherefore, reconsideration and allowance of claims 1, 2 and 4-7 is earnestly solicited.

Date: 08-21-09

Respectfully Submitted,



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VIII. CLAIMS APPENDIX

1. Water soluble salt cores manufactured by compacting a mixture of water soluble salts and binder under pressure and by subsequently subjecting said compacted mixture to a thermal treatment,

wherein the binder is an inorganic phosphate or a mixture of inorganic phosphates, the binder comprising between 0.5 and 10 by wt. % of said mixture of water soluble salts and the binder, the mixture of water-soluble salts and the binder further comprising between approximately 1 and 10% by weight of a parting agent comprising graphite,

wherein the mixture of the water soluble salts and the binder is compacted and subsequently sintered at approximately 200 degrees C, and

wherein the compacted and sintered mixture is not subjected to outgassing at a temperature below 700 degrees C during a heating process in the subsequent thermal treatment.

2. The water soluble salt cores as set forth in claim 1, characterized in that the binder comprises an inorganic borate.

4. The water soluble salt cores as set forth in claim 1, characterized in that the inorganic phosphate is a monoaluminium phosphate.

5. The water soluble salt cores as set forth in claim 1, characterized in that the inorganic phosphate is a boron phosphate.

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6. The water soluble salt cores as set forth in claim 1, characterized in that the inorganic phosphate is a sodium polyphosphate
7. The water soluble salt cores as set forth in claim 1, characterized in that thermal treatment occurs at temperatures of less than 730 ° C.

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IX. EVIDENCE APPENDIX

(None)

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X. RELATED PROCEEDINGS APPENDIX
(None)